Squelch Tales

MARA members try out I-LINK

In the March issue of QST there was and article on the Internet to amateur radio link system called I-Link. It looks like I-Link may become as popular as PSK31; the PC sound card based digital TTY mode. If you have not read the review in QST, I-Link allows you to get on the ham bands from your PC and/or hook the Internet to your station transceiver.

Windows based I-Link is not the same as the LINUX based IRLP system that was discussed at the last MARA Breakfast-Meeting. IRLP repeater systems are linked to other repeater systems across the country and around the world, but it is a similar to I-Link.

The I-Link system allows you to connect to radio links (nodes, gateways & remote bases), repeaters and just hams at their PC without radios and have very clear voice communications. There are roundtable (Net) sites that are like Internet chat rooms that allow multi-contacts with repeaters, links and just hams at their PCs too.

MARA members Mark Rideout N1JIM, Wayne "Woody" Wood, W1WEW and Bruce Randall, W1ZE are already hooked up and on the system and making QSOs. Mark and Woody have been in big roundtable QSOs on the net sites and had a great time. Bruce has several of his friends in southern California hooked to the system and QSOs with them most afternoons and evenings.

For further information about I-Link, get the March issue of QST and turn to page 38. Check out the program download site at www.aacnet.net and interface hardware site at www.ilinkboards.com.

IRLP, How It Started

An excerpt from the IRLP web site at
http://www.irlp.net/
by Dave Cameron VE7LTD
IRLP Designer

The **I**nternet **R**adio **L**inking **P**roject was started back in November of 1997 as an attempt to use the Internet to link radio systems across Canada. The first full time link that was established ran from Vancouver, BC to Saint John, NB. The link had many problems and was shut down in March of 1998 due to the numerous computer crashes and repeater lockups it was causing, and the lack of user control over the system.

I set out to design a better way to use the same technology to perform the same task, while improving usability, user control, and sound quality. My first breakthrough was to replace the existing operating system, Windows, with a more stable and versatile language. I chose LINUX, an IBM form of the operating system UNIX, because of its superior networking characteristics, its reliability, and its ease of programming.

I designed my own interface board to interface the radio to the computer. This allowed a large amount of delay to be removed from the system because two VOX circuits were no longer being used. I also wrote my own custom control software, and modified an existing voice-over-IP software package to accommodate the project.

The final product was a combination of hardware and software that created a nearly seamless radio link between two remote sites on the Internet. The product works so well that many people can not believe that they are talking through a link at all!   *Dave VE7LTD*

MARA Members help Brunswick Red Cross set-up Communications.

A three man MARA team consisting of Dan Lindsley (N5AGG), Brian Dorval (AA1WI) and Bruce Randall (W1ZE) had a meeting with Brunswick Red Cross volunteer Carolee Tribou (KB1HOC) Saturday February 16th. The purpose was to see what was needed to get the Ham Radio and Red Cross station up and running there. The RC facility has all the equipment needed but lacks the technical skills needed to make it happen.

On Thursday February 21st the team got their 2-meter FM equipment up and running and hopes to have the HF equipment up and running by early spring.

The big challenge for the installation team will be getting up effective HF antennas (especially for 80-40 meters) on such a small piece of real estate. When the time comes for antenna installation work, we hope that there will be additional volunteers from the ranks of the MARA to help.

January breakfast-meeting attendance up, A good sign.

The January and February MARA Saturday breakfast meetings at Dennies' has been a pleasant surprise because of increased attendance. The restaurant had to set up three tables to accommodate us all.

At the January meeting Bruce Randall, W1ZE representing the Technical Committee, announced a Internet-repeater linking plan called IRLP that he and Pete Russell, K1MJP would like to add to the 444.4 repeater. This linking project would allow MARA members to connect their communications to other IRLP capable repeater systems all over the country and around the world. In addition Pete and Bruce are in the process of upgrading the 444.4 repeater with a more powerful transmitter and improved receiver-transmitter audio fidelity. The Tech Committee asked that the membership approve the purchase of a new Diamond repeater grade11.5 dB collinear antenna for $200. The procurement action was approved by unanimous vote. (As *of this newsletter writing, the antenna is on back-order from HRO*). The February 23 breakfast meeting did not have as many folks in attendance but a good core group none the less. The up coming Maine State convention, April MS walk, and 444.4 repeater upgrade was the major topics of discussion. Brian, AA1WI who recently received his ARRL VE certification volunteered to assist the MARA sponsored exam session at the Maine State Convention. The group welcomed Bath resident and Brunswick Red Cross volunteer, Lee Tribou, KB1HOC to her first MARA event. The members in attendance committed communications support the American Red Cross and Bruce, W1ZE volunteered to provide Lee and the Red Cross with a lists of hams in the Sagadahoc county and Brunswick area so they could establish a list of potential communications volunteers.

MARA to provide comm support for the April MS Walk in Brunswick

As the MARA has done for these past years, We have promised to support the MS Society of Maine with amateur radio communications for their fund raising walk that will take place Sunday, April 7th. The walk that start and finish at the Brunswick Middle School will wind its way through the streets of Brunswick. We will provide communications from the checkpoints and monitor the progress of the walk. We hope that you will sign up to help. The volunteers should gather at the middle school at 7:30 AM. If you plan to volunteer please contact Bruce, W1ZE at 442-9630 or **w1ze@gwi.net** or Mark, N1JIM at **n1jim@gwi.net**.

FCC redesigns amateur service web site

The FCC has redesigned its Amateur Radio Service Web site and changed the URL <http://wireless.fcc.gov/services/amateur/>. The new layout makes it easier to find information on topics most requested by amateurs, including licensing, amateur exams, filing an application, changing an address or using the Universal Licensing System (ULS). The refurbished site also provides links to recent Amateur Radio-related news from the FCC.

"The new design is a part of the Wireless Telecommunications Bureau's continuing effort to meet the needs of the Amateur Radio Service operators as identified in focus groups, letters, phone calls, and e-mails," the FCC said in a news release.

The new design clusters FCC public notices, news releases, and other official documents affecting Amateur Radio operators on the right side of the page. On the left side of the page, the new navigation scheme displays information on the Amateur Radio Service, the sequential call sign system, licensing and vanity call signs as well as amateur-related communications policies such as reciprocal agreements. The site also offers links to information on the limited federal preemption known as PRB-1, the Part 97 Amateur Service rules and the Wireless Telecommunications Bureau and ULS sites.

The site, launched on February 20, includes a search engine for the entire FCC Web site <http://www.fcc.gov>. Direct questions or comments concerning the FCC's Amateur Radio Service Web site to Bobby Brown, babrown@fcc.gov, or Jennifer Bush, jbush@fcc.gov. For information concerning the Amateur Radio Service, contact Bill Cross, bcross@fcc.gov; 202-418-0680.

The Cheap & Easy J-Pole

Bruce Randall, W1ZE

At the February MARA breakfast-meeting over coffee and assorted breakfast delicacies, the subject of the twin-lead J-pole came up. And that it was a good performer for the investment of a couple of bucks. After the meeting I e-mailed some information on the twin-lead J to a couple of our members. After I did that I decided to share it with all of you.

There are several features which make the ubiquitous Twin-lead J-Pole antenna a good addition to your arsenal of ham radio toys . When rolled up, it is an extremely compact, pocket-sized antenna. In use, it makes for a very effective antenna and provides about 3 dBi of gain with a low take-off angle. When used on a HT, it will significantly out-perform your rubber duckie.

Technically speaking, the J-Pole is an end-fed, halfwave antenna with a quarterwave matching section to allow feeding with 50-ohm coax (what the old timers call a Zepp). Being a half-wave antenna, it is not dependent on a ground or radials. Which helps in portable operation. Here's what you'll need to build one for the 2 meter band:

A 60-inch piece of flat TV twin-lead. Use the inexpensive Radio Shack twinlead. Don't use the more expensive foam-filled line.   6 feet or more of coax cable. RG-174/U miniature cable makes for a very   portable antenna but don't use more than 6 feet of it; it's very lossy. Use RG-58/U if you like, but it will be a bit bulkier. Ferrite bead, type 43 material or a Radio Shack clamp-on ferrite choke.

BNC or PL-259 connector, depending on what is on your radio. Here's how you build it:
(1) Take the 60-inch piece of twinlead and strip back about 1/2 inch from one end. Twist and solder the two wires together. Keep the connection as short   as possible. This will be the bottom of the antenna.
(2) Measure up 1-1/4 inches from the bottom. With an Exacto or razor knife carefully remove the insulation, exposing both wires, as shown in Figure-1 below. Keep the notches small   (1/8" or so) and be careful not to cut the wires. This is where you will be attaching the coax.
(3) Attach your coax as shown in the diagram.
(4) Place the ferrite choke over the coax just below the bottom of the twin-lead. This will choke off any RF that might get coupled onto the coax shield. You may try not using the choke but if you experience problems with RF on the rig, go ahead and add the ferrite choke. As an alternately to the ferrite choke, you can wind the coax into a coil of about 5 inches in diameter with 4 turns to create a suitable RF choke.]
(5) Measure up 15-1/4 inches from the point where the coax braid is attached and make a 1/4-inch notch. This time, you want to cut through the wire. Only cut one notch and make sure it is on the side where the braid is attached. This will form the 1/4 wave matching section.
(6) Tape the coax to the twinlead for strain relief. Also, tape all solder connections and add some tape at the 1/4-inch notch for added strength. Now, measure up from the bottom of the antenna and cut it to an overall length of 54 inches. That's about all there is to it. To facilitate hanging, punch a small hole in the top of the antenna. Use monofilament fishing line or other non-conductive line through the hole for hanging. The J-Pole is very broad-banded, so it shouldn't require any tuning. (An SWR check, however, is recommended.) Just unroll it, hang it up, and communicate.
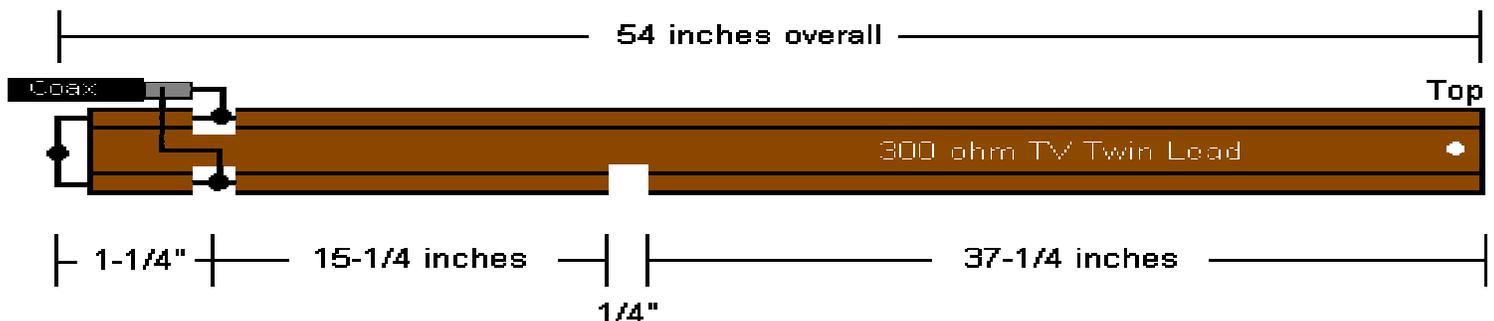

54 inches overall

Coax   Top

300 ohm TV Twin Lead

1-1/4"   15-1/4 inches   37-1/4 inches

1/4"

Figure 1. J-pole
(Not to scale)

WB3GCK '96

Merrymeeting Amateur Radio Assoc.

KS1R

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Hope to see you at the

ANDY HAMFEST & MAINE STATE

ARRL CONVENTION

Maech 29th & 30th

Ramada Inn, Lewiston